



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Antimicrobials Division (7510P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

8959-62

Date of Issuance:

11/13/18

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

CLEARIGATE EC9

Name and Address of Registrant (include ZIP Code):

Applied Biochemists, an Arch Chemicals, Inc. Business
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Jacqueline Hardy, Product Manager 34
Regulatory Management Branch 2
Antimicrobials Division (7510P)

Date:

11/13/18

2. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 8959-62.”
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 05/14/2018

If you have any questions, please contact Stacey Grigsby by phone at 703.305.6440, or via email at grigsby.stacey@epa.gov.

Sincerely,



Jacqueline Hardy, Product Manager 34
Regulatory Management Branch 2
Antimicrobials Division (7510P)

Enclosure

Note to reviewer:

[Items in brackets [AAA] are optional and may/may not be included on final label]

{Items in braces {AAA} are for information purposes and will not appear on final label}

Clearigate EC9

ACTIVE INGREDIENTS:

Copper Ethanolamine Complex, Mixed

(Mono CAS# 14215-52-2 and Tri CAS# 82027-59-6)* 3.825%

OTHER INGREDIENTS: 96.175%

TOTAL 100.000%

Contains 0.31 lbs. of copper per gallon

ACCEPTED

11/13/2018

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 8959-62

KEEP OUT OF REACH OF CHILDREN

[MANTÉNGASE FUERA DEL ALCANCE DE LOS NIÑOS]

DANGER [PELIGRO]

Read all Precautionary Statements [on] [back] [side] [panel] [inside booklet] before use.

FIRST AID:

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice."

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice."

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock as well as oxygen and measures to support breathing manually or mechanically may be needed. If persistent, convulsions may be controlled by the cautious intravenous injection of a short-acting barbiturate drug.

IN CASE OF EMERGENCY CALL: 1-800-654-6911

[Manufactured for] [Sold by]:

Applied Biochemists

1200 Bluegrass Lakes Pkwy

Alpharetta, GA 30004

EPA Reg. No. 8959-XXXX

EPA Est. No. Xxxxx-yy-zz

NET CONTENTS:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER.

Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing.

Personal Protective Equipment (PPE)

Mixers, loaders, applicators, and other handlers must wear the following:

- [•] Long-sleeved shirt and long pants,
- [•] Shoes and socks.
- [•] protective eyewear
- [•] waterproof gloves

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

USER SAFETY INSTRUCTIONS

Users must wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash outside of gloves before removing.

ENVIRONMENTAL HAZARDS: Do not use in waters containing Koi and hybrid goldfish. Not intended for use in small volume, garden pond systems.

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required. Certain water conditions include low pH (≤ 6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms. This product may be toxic to trout and other species of fish. Fish toxicity is dependent upon the hardness of water. **Do not** use in water containing trout if the carbonate hardness of water is less than 50 ppm. For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment.

To protect listed species in California, contact your County Agricultural Commissioner or refer to the Department of Pesticide Regulation's PRESCRIBE Internet Database: <http://www.cdpr.ca.gov/docs/endspec/prescint.htm>

PRODUCT INFORMATION

[Product Name {or} This product] is a highly effective algaecide, herbicide and cyanobactericide [(blue-green algae)] for use in: [Crop and Non-crop Irrigation Conveyance Systems,] [Potable Water Reservoirs,] [Lakes,] and [Farm,] [Fire,] [Fish,] [Golf Course,] [Industrial,] [Irrigation,] [Stormwater Detention,] [and] [Wastewater] [Ponds.] This product controls coarse Filamentous Algae (thick cell-walled string algae), muscilaginous Planktonic Algae (colonial), Chara and aquatic vegetation species that have a sensitivity to copper in conjunction with a penetrant. Waters treated with this product may be used for animal consumption, further potable water treatment, or irrigating turf or crops after treatment.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

1. Determine species and/or type of vegetation present.
2. Use **Table 1** to determine the dosage rate.

Table 1. Product Dosage Rate by Type				
Species or Type of Vegetation	PPM Copper	Amount of Product Required (gal/acre-ft)	Dilution (%Spray Solution V/V)	Treatment Comments
Colonial Diatoms ¹ [<i>Navicula</i> & <i>Fragilaria</i>]	0.3	1.8 - 2.6	5% - 10%	Diatom treatments may require treating the entire water volume and repeat applications may be needed.
Planktonic Algae	0.5	0.9 - 4.4	1.5% - 5%	Apply lower dosage rates on light infestations. Use higher rates on heavy blooms and where algae masses are clumped and accumulated.
Filamentous Algae	0.6	1.8 - 5.3	5% - 10%	Apply lower dosage rates on early season, light infestations or treatment of regrowth. Apply higher rates on surface mats and coarse species such as <i>Pithophora</i> , <i>Cladophora</i> or <i>Lyngbya</i> .
Chara/Nitella	0.8	3.6 - 7.1	10% - 15%	Apply lower dosage rates on new infestations or early season growth. Apply higher rates on older, established calcified plants. Apply as close to top of plant growth as possible.
SUBMERGED PLANTS				
Hydrilla [<i>Hydrilla verticillata</i>]	1.0	3.6 - 8.7	10% - 20%	Apply lower dose on early season, low density growth. Apply higher rates in thicker stands of plants. Product should be applied as close to the top of the plants as possible. Underwater injection is recommended when plants are more than one foot below water surface.
Naiad [<i>Najas</i> spp.], Pondweeds [<i>Potamogeton</i> spp.]	1.0	4.4 - 8.7		
Brazilian Elodea [<i>Egeria densa</i>]	1.0	5.4 - 8.7		
Water Milfoil [<i>Myriophyllum</i> spp.], Elodea [<i>Elodea canadensis</i>]	1.0	7.1 - 8.7		

FLOATING PLANTS				
Duckweed [<i>Lemna</i> spp.], Water Hyacinth [<i>Eichornia crassipes</i>], Giant Salvinia [<i>Salvinia molesta</i>]	0.5 - 1.0	4.4 - 8.7 gal/surface acre	20% - 25%	Apply lower rates in shallow water (<1 ft.). Use higher rates for large infestations in deeper water (≥1 ft.). Use a fine spray and wet plants thoroughly. Do not disturb with motor wake or paddles after treatment.

¹ Colonial diatoms are a form of algae characterized by having cell walls made of silica, a mineral substance. Certain species of diatoms grow in colonies, usually on sand or concrete surfaces, and produce gelatinous masses. Effective control has been achieved using the rates listed.

- Determine acre-feet within the intended treatment area (area of infestation) by measuring length, width and average depth using the formula [below][location]:

$$\text{length (ft.)} \times \text{width (ft.)} \times \text{average depth (ft.)} / 43,560 = \text{acre-feet}$$

Note: 43,560 sq. ft. = 1 acre-foot

- Multiply acre-feet from step #3 times the dosage rate from step #2 to calculate the total gallons required for the treatment area.
- The following are techniques to apply this product:
Surface Spray Application: Prepare solution at dilution rate from **Table 1**. Ensure dilution rate will allow relatively even application throughout the intended treatment area with the type of equipment being used. Apply close to the water surface.
Injection Application: Prepare solution at dilution rate from **Table 1**. Inject solution below the water surface through submersed hoses for treatment of submerged growth.

For effective control, proper chemical concentration contact should be maintained for a minimum of three hours. Application rates in this section are based upon static or minimum flow situations in lakes, ponds, reservoirs and inactive irrigation conveyance systems or drainage systems. Where significant inflow occurs (greater than 10% of total water volume in 24 hours), it is recommended that flow be stopped for 24 hours during and following treatment. If this is not possible, treat inflowing water in accordance with **Flowing Water Application** instructions.

TANK MIX APPLICATION

This product can be tank mixed with other herbicides to improve efficacy; and to control algae in areas where heavy algae growth may cover target submersed plant species and interfere with herbicide exposure. Do not mix concentrates in tank without first adding water. To ensure compatibility, conduct a jar test before application. This product must not be mixed with any product containing a label prohibition against such mixing and must be used in accordance with the most restrictive label limitations and precautions. Label dosage rates must not be exceeded.

To ensure compatibility, a jar test is recommend before field application of any tank mix combination.

FLOWING WATER APPLICATION

1. Accurately determine water flow rate. In the absence of weirs, orifices or similar devices which provide accurate water flow measurements, volume of flow may be estimated via the following formula:

$$\text{average width (ft.)} \times \text{average depth (ft.)} \times \text{velocity* (ft/sec)} \times 0.9 = \text{cubic feet per second (cfs)}$$

*Velocity is the time it takes a floating object to travel a given distance. Dividing the distance traveled (ft) by the time (seconds) will yield velocity (ft/sec). Repeat measurement at least 3 times at the intended application site and use the average of these measurements.

2. Calculate volume of ditch, canal, lateral or receiving pond in cubic feet based upon water levels at the time of treatment by using the following formula:

$$\text{length (ft)} \times \text{average width (ft)} \times \text{average depth (ft)} = \text{cubic feet of water}$$

3. Calculate turnover time (the amount of time it takes for the water in the system to be replaced by new water). Convert to hours using the following formula:

$$\frac{\text{canal volume (ft}^3\text{)}}{\text{flow rate (CFS)}} \div 3600 = \text{turnover time (hrs.)}$$

4. Use **Table 2** to determine the dosage rate

Table 2. Flowing Water Application Dosage Rate by Type

Species or Type of Vegetation	PPM Copper	Dosage Rate ¹ (Qt. per CFS/Hour)
Planktonic algae	0.1 - 0.5	0.3 - 1.4
Filamentous algae	0.2 - 0.6	0.6 - 1.7
Chara/Nitella	0.4 - 0.8	1.2 - 2.3
Submerged weeds	0.5 - 1.0	1.4 - 2.8

¹ Use higher dosage range in cooler water (60°F - 70°F), under conditions of heavy growth and/or on matured plant growth. Lower dosage ranges may be used on maintenance control treatments, young plants and/or under minimal growth conditions in warmer waters (>70°F).

5. Calculate amount of product required using the dosage rate from step #4, times the flow rate from step #2, times the turnover rate from step #3.

$$\text{Product Required (qts)} = \text{Dosage Rate (qt/CFS/hr)} \times \text{Flow Rate (CFS)} \times \text{Turnover Time (hrs)*}$$

Note: If turnover time is less than 3 hrs, substitute 3 hrs. into this calculation.

Use **Table 3** to determine the number of drip/metering application sites required (based upon turnover time). Ponds and other sites where water is stored for a calculated retention time and are fed by a single input source will require a single dripper/metering system. Treat inflowing water at the dosage rate from **Table 2** for the turnover time calculated in step #3.

Table 3. Required Drip/Metering Sites	
Turnover Time (Hrs)	Number of Sites
Less than 4.5	1
4.6 - 7.5	2
7.6 - 10.5	3
10.6 - 13.5	4
13.6 - 16.5	5

6. Calculate distance between drip/metering sites by using the following formula:

$$\frac{\text{Canal/Ditch/Lateral Length (ft)}}{\text{No. of Drip/Metering Sites}} = \text{Distance Between Drip/Metering Systems (ft)}$$
7. Calculate amount of product required per drip/metering site by using the following formula:

$$\frac{\text{Total Product Required (qts)}}{\text{No. of Drip/Metering Sites}} = \text{Product Required Per Site (qt)}$$
8. Calculate drip/metering duration per site by using the following formula:

$$\frac{\text{Product Required Per Site (qts)}}{\text{Dosage Rate (qt/CFS/hr)} \times \text{Flow Rate (CFS)}} = \text{Drip Metering Duration (hrs) Per Site}$$
9. Calculate drip/metering rate by using the following formula to convert to fl. oz./min or mL/min.:

$$\text{Flow Rate (CFS)} \times \text{Drip Rate (qt/CFS/hr)} \times 0.533^* = \text{Drip Rate (fl. oz/min)}$$

Note: 0.533 is a constant used to convert qt/hr to fl. oz./min

METRIC CONVERSION: Drip Rate (fl. oz./min) x 29.57 = Drip Rate (mL/min)

Calibrate drip system, metering pump or similar dosage device to establish output rate determined in step #10. This can be done using a watch with a second hand and a calibrated measuring cup, graduated cylinder or similar vessel. If possible, calibrate all drip/metering devices prior to beginning actual treatment. Turn them on as simultaneously as possible, beginning with the device furthest upstream. Begin with only the amount of product required at each site or record your start-up time and shut down drip/metering systems after the drip/metering duration time period determined in step #8.

PRE-TREATMENT CONSIDERATIONS:

The following suggestions apply to the use of this product in all approved use sites:

- For best results apply during calm and sunny conditions with 8 to 10 hours of daylight remaining, when water temperature is at least 60°F.
- Treat when growth first begins to appear or create a nuisance, as evidenced by initial taste and odor complaints, high cell counts or chlorophyll a concentrations, high MIB or geosmin concentrations, visible surface scum formations, low Secchi disk readings, significant daily fluctuations in dissolved oxygen, and/or sudden increases in pH. Monitoring these parameters to optimize the timing of treatments and reducing the amounts of product needed for seasonal control.
- Identify primary nuisance species to determine the most accurate dosage rates.
- Apply in a manner that will ensure even distribution of the chemical within the treatment area. Effective control of algae requires direct contact with all cells throughout the water column, since these plants do not have vascular systems to transport active ingredient from cell to cell.
- Visible reduction in algae growth should be observed in 24 to 48 hours following application.
- Wait at least 2 days to re-treat areas if re-growth or new growth begins to appear and seasonal control is desired. Identify the new growth to re-check required copper concentration that may be needed for control.
- Clean spray equipment by flushing with clean water after treatment.

The following suggestions apply to the use of this product in flowing water:

- Maintain suitable contact time through proper concentration or additional metering sites to achieve effective aquatic plant control.
- Level of control is also affected by type of growth present, degree of infestation, water temperature and weather conditions during and following treatment.

PRODUCT APPLICATION RESTRICTIONS:

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribe agency responsible for pesticide regulation. Do not enter or allow others to enter until application of product has been completed. Do not apply more than 1.0 ppm as metallic copper in these waters.

Spray Drift Management

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and the method of application (e.g., spray tank, backpack sprayers, sprayer-equipped boats) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet down wind.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

Equipment

All ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Permits:

Some states may require permits for the application of this product to public waters. Check with your local authorities.

STORAGE & DISPOSAL:

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Keep container closed when not in use. Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not reuse or refill container. Do not contaminate feed, feedstuffs, or drinking water. Do not store or transport near feed or food.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

(For ≤ 5 gallon non-refillable containers only):

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning if available or puncture and dispose of in approved landfill, or incineration. Consult Federal, State or local authorities for approved alternative procedures.

(For > 5 gallon non-refillable containers only):

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ with water and recap. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning if available or puncture and dispose of in approved landfill, or incineration. Consult Federal, State or local authorities for approved alternative procedures.

(For Refillable container only):

CONTAINER DISPOSAL: Refillable container. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat rinsing procedure two more times. Then offer for recycling or reconditioning if available or puncture and dispose of in approved landfill, or incineration. Consult Federal, State or local authorities for approved alternative procedures.

[WARRANTY DISCLAIMER

Neither the manufacturer nor the seller makes any warranty, expressed or implied concerning the use of this product in a manner that is not consistent with the use expressly set forth on the label. To the extent permitted by, and consistent with, applicable law, buyer assumes any risk of use of this product that is not consistent with label use instructions. Read and follow the label directions.

{BEGIN - OPTIONAL MARKETING CONTENT}

[Algaecide]/[Herbicide]/[Cyanobactericide]

Chelated copper algaecide and herbicide

[Clearigate] [(Brand)] [and] [the Applied Biochemists logo] [is a] [are] trademark[s] of Lonza or its affiliates.

Controls cyanobacteria (blue-green), green algae and diatoms

Developed by professional applicators to fight the toughest algae and weed problems

Does not add water use restrictions.

Eliminates tolerant algae

For Use In: [Crop and Non-crop Irrigation Conveyance Systems,] [Ditches, Canals, and Laterals,] [Potable Water Reservoirs,] [Lakes,] and [Farm,] [Fire,] [Fish,] [Golf Course,] [Industrial,] [Irrigation,] [Stormwater Detention,] [and] [Wastewater] [Ponds].

For product questions, call 1-800-558-5106

From mixed Copper Ethanolamines in an Emulsified Formulation

[Kills][controls][destroys] algae

Lonza

Pat. No. 5,407,899

Tank mix [with other herbicides or algaecides] for superior control

Treats string algae [filamentous algae]

{END - OPTIONAL MARKETING CONTENT}